TELEDYNE RYAN AERONAUTICAL

ACHIEVER

SAN DIEGO, CALIFORNIA | VOL. 9, NO. 2 | FEBRUARY 1993

TRA Featured In Teledyne Annual Report

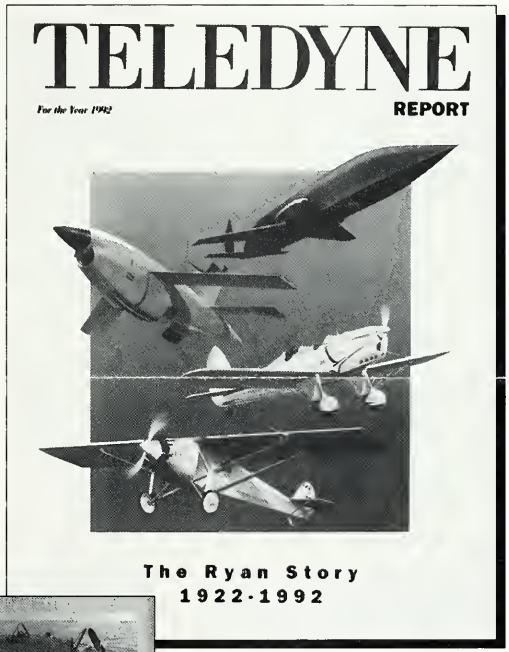
A great honor has been bestowed on TRA and its employees as the company was featured in the 1992 edition of the Teledyne, Inc. annual report.

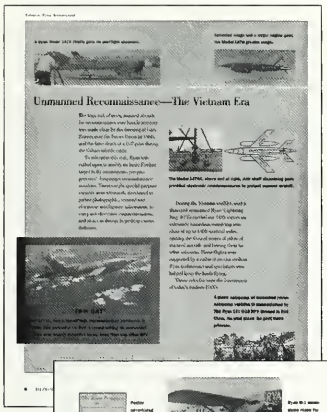
With more than 63 companies in the Teledyne organization, there naturally is a plethora of news from which to choose. This year's annual report includes a dramatic cover illustration by TRA's Randy Crawford, plus 14 pages of text and color photos inside depicting some of the major Ryan achievements.

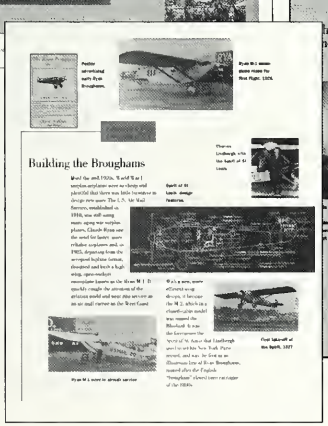
The material in the report came largely from the books written by Bill Wagner, noted aviation historian and author who has been associated with Ryan for more than half a century.

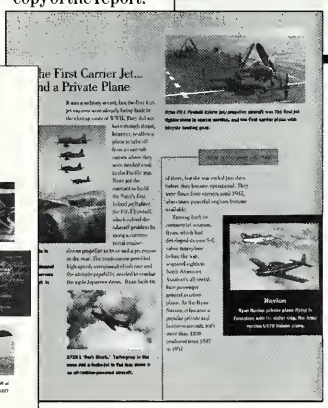
The introduction to the Ryan section says "On this, the 70th anniversary year of the founding of the original Ryan Flying Co. in 1922, Teledyne Report presents the following picture history of this outstanding Teledyne company."

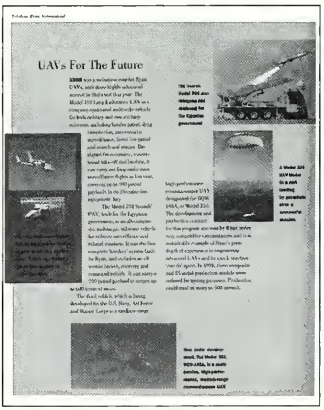
Every TRA employee gets a copy of the report.











Final Model 324 Deliveries

Pride mixed with nostalgia last month as the final two Model 324 vehicles rolled off the assembly line in Mojave.

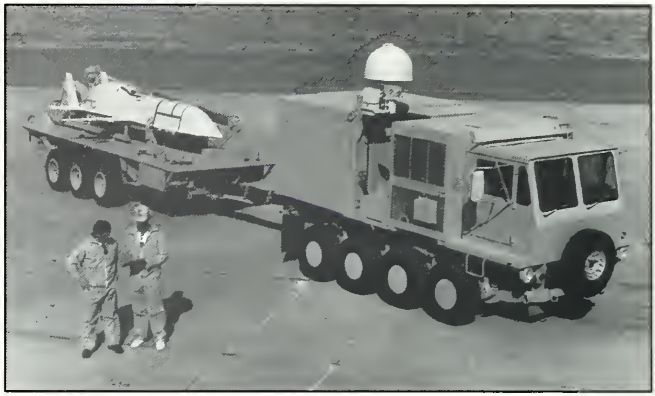
The three year program was concluded on schedule and below budget—a real tribute to all the Model 324 team members in San Diego and Mojave. "Everyone was dedicated to completing the program on time by getting the last two air vehicles assembled, tested and out the door," reports Bob Smith, Executive Director of the Model 324 program.

The contract just concluded for the Egyptian Air Force called for delivery of 27 aircraft along with three Launch and Recovery Vehicles (LRV) plus test equipment and spares. Under an earlier Model 324 contract, TRA delivered 29 UAVs, three LRVs, test equipment and spares.

After these two final birds received their sky-blue paint from Elmer Bowling's fabrication/paint team, they were ready for shipment through arrangements made by Dan Loo, Project Coordinator.

"We've worked long hours over the past few weeks" said Doug Fronius, the Model 324 Deputy Program Manager, "but it's paid off. We're confident the UAVs will work flawlessly when they reach their destination in the Egyptian desert."

These sentiments were echoed by employees like Mike Wilson, System Test Director, and Bob Gebhard, Quality Engineer, who spent long hours making sure the project reached a successful conclusion.



The final Model 324 UAV system for the Egyptian Air Force underwent final checks by Greg Russell, Integration Team Leader (left), and Randy MacPherson, Model 324 Manufacturing Manager, at Mojave. The system includes a 40,000 pound eight-wheel all-terrain vehicle carrying a command and control shelter and a six-wheel launch trailer.

No Smoking!

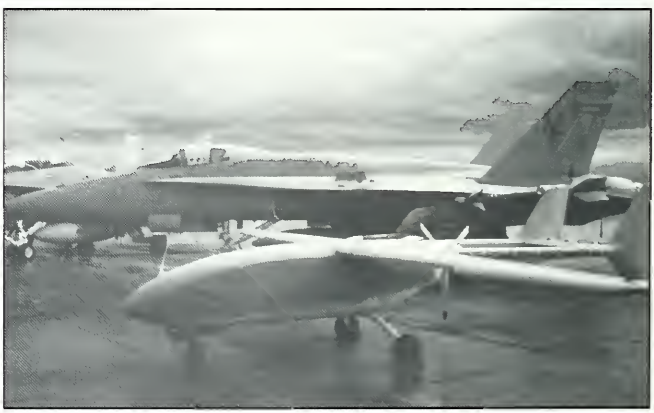
TRA is now a non-smoking facility.

In keeping with employee requests and additional concerns raised by recent test results on the health risks presented by "second-hand smoke," all offices and all buildings at TRA have been designated as no smoking.

Special outside areas will be designated for use by those employees who do smoke so they can continue to do so on a non-interference basis.

The EPA recently announced that studies show second-hand smoke has a "serious and substantial public health impact" and causes 3,000 cancer deaths a year.

Employees interested in smoking cessation programs can get details from Nicki De Necochea, Ext. 4373.



The old and the new nestled at the Marine West meeting at El Toro last month, when TRA's Model 410 was under the wing of this F/A-18 — the oldest F/A-18 still flying with the Marines. Note number 03 on its nose. The Model 410 was there as part of the TRA exhibit to help display the company capabilities to the service leaders assembled there.

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Major Milestones In Model 350 Program

Two major milestones recently achieved in the Mid Range UAV (Model 350) program have set the stage for additional dramatic events in the coming weeks.

1—A highly successful flight test on December 21 provided real-time imagery of simulated enemy ground targets;

2—Preliminary Carrier Suitability Tests demonstrated how an F/A-18 could safely land on a carrier with a MR UAV still attached under one wing.

"The successful December flight was a real tribute to all of the members of the team who worked so hard to make it happen," reports TRA Vice President and program manager Dan DaPra. "The images we obtained were really impressive, and the whole flight was extremely smooth."

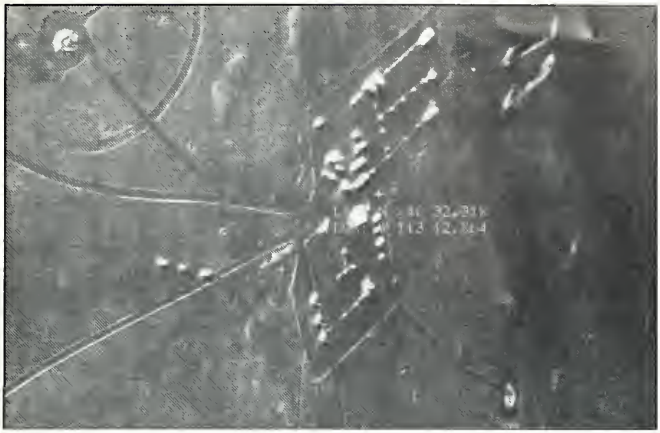
"The carrier suitability tests took some unusual effort by our people to support the Navy in this critical program.

"Now we are embarking on a full year of events which will be very up-tempo and should be quite exciting for all of us. We will be making significant progress in the next several months," DaPra said.

In the December flight, the second composite vehicle in the program flew for 59 minutes over the Utah Test and Training Range. Images were transmitted to TRA's Local Control and Monitoring Station (LCMS), where vital information (latitude, longitude, altitude, time, etc.) was annotated on the side of the imagery. Even though the aircraft was moving at nearly 500 knots, the images were clear and usable.

The flight path was flown 100% autonomously following the profile pre-programmed into the aircraft avionics. Recovery of the vehicle was by parachute as planned.

While part of the MR UAV team was working on this critical flight, other members of the group were busily building the first all metal aircraft. Construction of the first of two STAs (Structural Test Article) has begun and is due to be completed in June.



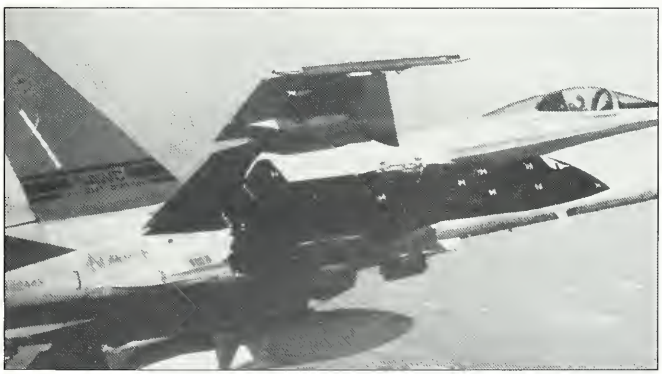
Images taken from the December flight of the Mid Ronge UAV depicted simulated enemy targets such as aircraft and wheeled vehicles on the ground.

Following that will be four IUAV (Inert versions which have no engine and are used for captive tests), and then the full flight vehicles. First of these complete vehicles is scheduled out the door in September. Current emphasis is on completion of tool design and fabrication.

The F/A-18 carrier suitability tests began in November and were finished in mid January. Special instrumentation was added to the vehicle, along with foam rubber pads to measure clearances. The program was initiated to determine what would happen if an F/A-18 pilot had to abort a mission and return to the carrier with a UAV still under one wing and nothing on the other side for balance.

The testing was done with hardware simulating an adverse airflow and clearance scenario, with all tests resulting in safe landings.

Testing was done at the Patuxent River Naval Air Station in Maryland.



Navy F/A-18 carried an MR UAV as part of a carrier suitability test.

It's All In The Family — The TRA Family

When T. Claude Ryan started his company, he envisioned a family-oriented, friendly place to work. Now 71 years later, we find that family tradition still holding firm.

For example, four generations of the Helm family have worked at Ryan, including three generations still active.

The Helm family TRA dynasty began when Gordon A. Helm left Flint, Michigan in 1940 to join the Ryan School of Aeronautics. He had learned to fly in 1918 and became an instructor and squadron leader for the WWII Ryan training school at Hemet, California. One of his students, Malcolm Stafford, became one of the first fighter aces in the European Theatre.

Gordon W. (Bud) Helm joined the company in 1951, and today serves as a coordinator in production control. His daughter, Marla Helm Mitro, is a sealer in the paint shop. Rod Taylor, who married into the Helm family, is a senior coordinator in production control.

Bud's granddaughter, Kari, is married to Steve Schuler, also in production control.

Marla also maintained the family tradition when she met Scott Mitro on the job here, and they were married after Scott moved on to another company.

"Ryan has certainly always been a good place for us," is the way Bud Helm summarizes his family connections with the company.

Fred Simonides who worked here 43 years before retiring also started a dynasty. Son Marty has been with Ryan for 28 years and another son, Jeff, has been here more than a decade.

Bob and Earl Nelson are both sons of Don Nelson, who joined TRA in 1938 and stayed for more than four decades. Bob is approaching the four decade mark as well, and Earl has been here 15 years. Another brother, Tom, also worked at TRA in the late 1950s as did his wife, Janice. Bob's son Donald, is another ex-TRAer.

And to make the story complete, Bob and Earl's mother, Alberta, was at Ryan with the Rosie The Riveter set during World War II.

At one time there were five members of the Almada family working at TRA, and there still are three—Bob in production control, son Jeff in Composites and daughter Theresa in Art Services. Bob began with Ryan 25 years ago, and obviously had nice things to say about the company at the family dinner table.

There are plenty more examples—like Jim McIlwain and his son, Tim; C.S. Lemelle and C.B. Lemelle, Don and Chuck Kostewa, and Josh and Dave Lawton, as well as families with names like Estepa, Akey, Odom, St. John, Bonafede, Camillo and on and on.

It seems like TRA is a fine place to work. For All in the Family.

(Editor's note: If you have another fun TRA-family story to relate, call the Achiever office at Ext. 4365. We'd like to feature more in future issues.)

Photo of family scion Gordon Helm is proudly displayed by son Bud Helm, granddaughter-Marla Helm Mitro, and grandson in-law Rod Taylor.

401K — A Solid Savings Program

The 401K savings program—enjoyed by salaried employees for the past 18 months and recently available also to hourly employees—continues to show positive growth.

The annualized rates of return for the fourth quarter of 1992:

Money Market Fund	3.37%
Equity Index Fund	20.44%
Asset Allocation Fund	12.35%

Teledyne, Inc. stock closed at $20.375.

This highly regarded savings program allows employees to put a percentage of their salary into a 401K fund before income taxes are withheld, making it an especially attractive tax-deferred investment. Additionally, the Company will match 50% of the first $50 employees save each month. The maximum amount any employee can contribute to the plan in 1993 is $8,994.

Employees interested in taking advantage of this savings opportunity should contact the Benefits Office. Enrollment is open once each quarter, with the next deadline February 26 for any of the four investment options shown above.

Employment Opportunities

Avionics Systems Engineer

MS in Electrical Engineering, Systems Engineering, or related field plus a minimum of 10 years experience in the design, development, test, and integration of avionics systems, inertial navigation, GPS, and automatic flight control. Specific experience with applied real-time Kalman Filtering, digital systems design, algorithm requirements development, software design and implementation required. Applicant must be able to work in small multi-disciplinary advanced avionics organization, and must be comfortable with both hardware and software.

Electronics Design Engineer

Minimum of a BS in Electrical Engineering, Electronics Engineering, or relevant experience in place of the degree is required. Applicant must have a minimum of 10 years avionics-related experience in digital circuit design, analog circuit design, microprocessor system design, and A/D's and DAC's. Applicant must be able to work in a small multi-disciplinary advanced avionics organization and must be comfortable with software.

Software Engineer

Senior level software engineer with a BSE or MSE (preferred) degree and a minimum of 10 years experience in real-time embedded avionics software. Applicant must be system oriented and have experience in navigation and/or control systems, applied real-time Kalman filtering, software requirements development, design, implementation, and system integration. Applicant should be fluent in Ada with some experience with FORTRAN and Pascal or C as a minimum. Applicant must have some experience with CASE tools, disciplined software engineering (such as 2167A), software metrics, TQM, software cost estimating and development planning. Applicant must be able to work in a small multi-disciplinary advanced avionics organization and must be comfortable working with hardware.

Rideshare Solutions

We'd like to hear your favorite stories about commuting to work—the good and bad, what works well and what doesn't work.

The idea is to help each other learn more about the most effective ways of getting to and from the job. The goal is to increase the number of employees who use alternate forms of transportation rather than driving in a car all alone. As the freeways become more crowded and the air becomes more polluted, government agencies are considering adding restrictions for commuters. If enough employees voluntarily get on the bandwagon and off the drive-alone scenario, there will be no need for additional laws.

The stated goal by the government agencies is to have the average vehicle ridership at 1.65 this year and 1.70 next year, well above the current TRA average.

So if you had a fun experience using the transit pass (which can be purchased at a huge discount in the company store), or are sharing rides with a new friend, or jogging or biking or some other way to beat the commuter blues, let us know. Drop a note to the Achiever, Mail Code 745D, Extension 4365.

Nicki De Necochea, Ext. 4373, is the TRA commuter coordinator, and can provide information on the various options available to those interested in cutting down freeway traffic and improving air quality.

Members of the highly successful Apache Comprehensive Corrective Action Program (CCAP) were (left to right) Dave Makepeace, Alan Arckless, Kris Valentino, David Hudspeth and Don Griego.

Apache Comprehensive Corrective Action Program Validates Existing Process

Intensive teamwork efforts paid off dramatically last month with the highly successful conclusion of the Apache Comprehensive Correction Action Program (CCAP).

It was a joint MDHC-TRA activity, which began in September, 1992 with a goal of focussing joint resources on "high impact" corrective actions to improve the production processes on the AH64 Apache shipsets produced by TRA for MDHC and the U.S. Army. CCAP was officially terminated January 22 after reaching its stated goals.

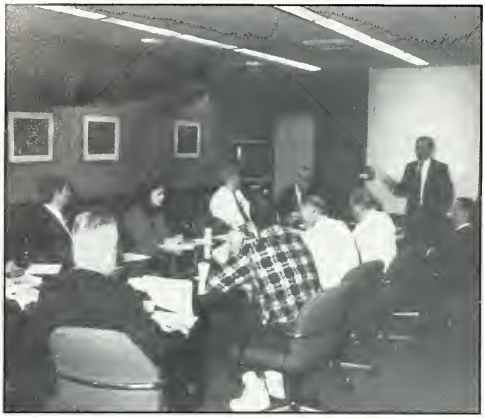
At a final meeting, the team was praised by MDHC Resident Program Manager Don Howell for "a job well done in accomplishing the team's mission in an ahead-of-schedule, professional approach."

Team Leader Kris Valentino said "we first collected historical data on every phase of Apache production over the past two years, a monumental task, to define potential improvement areas. We then reviewed and investigated these areas. It worked."

It worked so well the team was able to disband after only a few months of concentrated activity. In pursuing their objectives, the team validated TRA's existing corrective action system by their positive findings which indicated the process already in place had been working well. The project also was credited with improving MDHC-TRA communications and working relationships.

In addition to Valentino, members of the team were Don Griego and David Hudspeth from TRA and Alan Arckless and Dave Makepeace from MDHC. All were recognized for their contributions with certificates of appreciation from TRA.

TRA Apache Program Director Bob Hamrick said "every member of the CCAP team and indeed the members of the whole Apache project did a great job in accomplishing the objectives in such a short period of time. Our government representatives are likewise pleased, and there is no need to continue CCAP as a formal organization. We will of course continue to work to upgrade Apache production in every way we can."



The TQM Executive Steering Committee discussed progress for 1992 and plans for 1993 at its kick-off meeting last month. VP Ken Carson provided the summary of achievements to date in the year and a half old program.

Service Awards

An upgraded program of service awards has gone into effect for TRA employees. Among the first to have a chance to review the new catalogs and make selections are Dave Noe (left) and Tom Matson, both of whom are celebrating 15 years with the company.

TQM Projects Help TRA Run Smoothly

Making today a little bit better than yesterday, and tomorrow even better than today.

That's the mission of the Total Quality Management program at TRA, which began in the summer of 1991 and moves into a higher level of activity now that some programs are reaching maturity.

Eighteen TQM teams have been established since the program began, representing a wide variety of disciplines throughout the plant. Accomplishments to date include major changes in composite operations, enhancements in environmental projects, modifications in contract procedures, changes in Apache final assembly, new equipment and processes for sheet metal work, and improvements in the operation of the machine shop.

More than 100 employees have been trained in the TQM process, and additional training is scheduled for this year.

One of the current TQM projects which will have wide impact throughout the facility is allocation of additional resources for the microcomputer support program to enhance the effectiveness of computer usage and operation at TRA.

At Ease... After more than 200 years!

Isabel Duenas
Dept. 440
35 years, 6 months

Louis Mordick
Dept. 173
36 years, 2 months

Paul Tanida
Dept. 130
25 years, 8 months

Glenn O'Larry Emison
Dept. 345
39 years

Lela Davis
Dept. 159
40 years, 4 months

Paul Green
Dept. 315
26 years, 4 months

Service Anniversaries

5 Years

Marilyn Oldendorph	Mike Ornelas
Joann Ridge	Chuck Snyder
Ralph Strahan	

10 Years

Tish Adamos	Lee Baca
Al Calero	Glen Crawford
Josephine Cudney	Ken Marxsen
Chrissy Oxley	Bob Pavich
Roland Squires	Art Wright

15 Years

Tom Matson	Dave Noe

25 Years

Florence Bray

30 Years

Ron Akey	Lenny Linen

40 Years

John Urone

Books Available

If you would like extra copies of the *Employee Yearbook* or *Fireflies and Other UAVs*, they are for sale at the Employee Store. Cost is $5.00 each.

Each employee is entitled to one of each of the books, but several have requested additional copies to give to friends, family, etc.

The Store, located in Building 100, is open Tuesdays and Fridays from 11 to 11:30 a.m. and 2:45 to 3:15 p.m.

Ethics Coordinators

"It's everybody's job throughout the company to support an effective ethics program. We just coordinate it."

That is the way TRA's Ethics Officer Don Wilkins described the program at a meeting of all Ethics Coordinators last month. The coordinators represent the different departments at TRA, and are asked to help employees better understand how the Ethics Program operates and how concerns can be aired without fear of retribution.

Wilkins also reported that expanded training on the important issue of ethics will be given this year to supplement the information in the revised 1993 edition of the Teledyne, Inc. Code of Business Conduct which goes to each employee.

Ethics Coordinators are Waver Campbell, Bob Carpenter, Rich Ebel, Bill Evans, Bruce Ford, Bob Gresham, Jerry Hawkins, Jim Herrera, John Koger, Gary Pavlick, Bob Perkins, Jim Pisciotta, Barret Pulver, Jack Usher, John Vang and John Williams. Brooke Butler in the Legal Department assists Wilkins in administering the program.

Wilkins emphasized "the ethics program is not intended to catch mistakes after they are made—the purpose is to create an atmosphere that encourages and allows employees to make the right decision in the first place."

Ethics Officer Don Wilkins explains 1993's program to enhance increased awareness among all employees at a meeting of company ethics coordinators.

Ethics Winner

Linda Harmon, the November winner of the Ethics Awareness Quiz, receives her Entertainment '93 prize from Ethics Officer Don Wilkins. You have a chance to win in this month's quiz by correctly answering the question listed in the form below.

This month's Achiever Ethics Awareness Quiz provides each TRA employee an opportunity to win a nifty Ryan cap.

The Awareness Quiz is published regularly in the Achiever, and a drawing is held among all of the correct answers to determine who gets the prize.

This month's question asks for the correct address to use for writing to Teledyne Corporate with an ethics question or concern. The right answer is found on ethics posters displayed throughout the plant. To enter, detach the entry form, fill in the blanks, and deposit it in one of the boxes at Cafe Ryan, Gate 2 or Gate 7. Entries must be submitted by 4 p.m. one week after the Achiever is distributed. Decision of the judge will be final—and ethical.

TRA encourages the prompt reporting, in confidence and without fear of retribution, any suspected violation of the Teledyne Code of Business Conduct.

Achiever Ethics Awareness Quiz Entry Form

(please print)

Name _____

Clock No. _____

Dept. _____

Ext. _____

What Is The Address To Write In Confidence To Teledyne Corporate If You Have An Ethics Concern Or Question?

Address _____

(Directors and above and members of the Ethics Officer's staff are not eligible to win. One entry per employee.)

TELEDYNE RYAN AERONAUTICAL
ACHIEVER
P.O. Box 85311
San Diego, CA 92186-5311

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Address Correction Requested

Bulk Rate
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PAID
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San Diego, CA

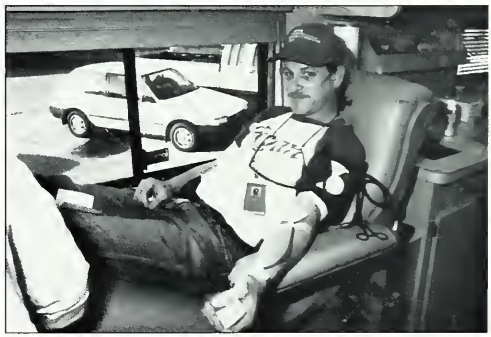
Printed on recycled paper

People to People

Hurting and heartbreak were twins that dogged many of us at TRA at the time of the huge rains last month. Water damage and mud created havoc for many. At **TRAM in Mexico**, only a handful managed to make it to work, and some families lost their entire homes. The Management Club put together a relief program to try to help with some of the hurt... **Robin** and **Kathie Fritchman** left for Baja California in their RV for a little vacation on December 27—and got back home January 8. Flooding water stranded them and hundreds of other vehicles, whose owners formed a community of co-help to share food and gas. Nobody had very much information about what was really happening, and Robin finally had to drive 220 miles south just to get to a pay phone to find out what was happening in the United States. After many days of frustration, the Fritchmans got a ride north in an airplane making a milk run. The RV is still in Mexico... **Alexis Jordan** is a very special baby for TRA. Her dad **Steve Schuler**, grandfather **Rod Taylor** and greatgrandpa **Bud Helm** all work here in Department 218. Great aunt **Marla Mitro** is in Department 140/255. See a related story about families on page 4... **Mary Beard** asks that we thank all those who participated in her great send-off party before her retirement in December. Mary knew lots of employees by their names and voices if not their faces, as she worked here many years as our switchboard operator... **Verna Beaver** expresses her sincere thanks for the condolences, cards and flowers following the death of her husband... **Randy MacPherson** earned his Master's Degree in Industrial and Technical Studies from San Diego State University just before the end of the year.

The Safety Leaders

Autofast (Dept. 154) was the big, big safety winner in 1992. The group teamed together to go the entire year with no injuries and no lost time accidents. Each member of the team receives 5,000 extra Bee Safe points, as well as a pizza luncheon from TRA and the sincere adulation of the rest of the employees who are striving for a perfect safety record. From the left are Mel Mullaney, Dave St. John, Tony Kabala, Whammer Pham, Rich Doll, Dianne Reasman, Paul Abatie, Ron Gosselin. The department also had TRA's top safety record in 1992.



Among the 59 employees who volunteered to give blood last month were Don Griego (left) and Mike Riebe. The TRA Blood Bank is a positive and practical life-saving way for TRAers to help others in need.